

BENNY PRATAMA

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PROFESIONAL SUMMARY

Electrical Engineering graduate with hands-on experience in embedded systems, IoT, robotics, electrical control, and data analysis. Skilled in C/C++, Python, ESP32, Arduino, Raspberry Pi, ROS2, PLC programming, and DlgSILENT PowerFactory. Experienced in sensor and actuator integration, motor control, electrical wiring, troubleshooting, system testing, and technical data analysis. A collaborative and adaptable individual with strong problem-solving skills and practical engineering experience.

EDUCATION

Telkom University - Bandung

Aug 2022 - Aug 2026

Bachelor of Electrical Engineering, GPA: 3.49/4.00

- **Research Title:** Reconstruction of 3D Space Visualization Monitoring Based on a Moving 2D LiDAR
- **Relevant Coursework:** Internet of Things (IoT) Systems, Robotics, Power Systems, Artificial Intelligence (AI), Telecommunication Systems, Sensors and Actuators, Electric Power Generation, Printed Circuit Board (PCB) Design and Development, Machine Learning and Applications, Industrial Automation, and Electronic Circuits.

WORK EXPERIENCE

PT. Telkom Indonesia – Jakarta Utara

Jun 2025 – Aug 2025

Internship - Shared Services Officer

- Managed and entered vendor payment data using Microsoft Excel and the MyDx system.
- Prepared, reviewed, and organized vendor payment documents and invoices.
- Analyzed electricity consumption data based on kWh records and equipment specifications.
- Coordinated with relevant units to collect and verify vendor data.

Instar Education - Bandung

Nov 2024 – Des 2024

Internship - Electrical Engineering Technician

- Assisted in electrical and electronics projects, including robot development and assembly.
- Inspected, tested, and troubleshooted electronic components and equipment.
- Supported project completion based on client requirements.

Fivem Project

Jul 2023 – Apr 2025

Freelance - 3D Game Designer & Admin Team Lead

- Created and customized 3D assets and textures for MLO's, vehicles, and player clothing.

- Developed visual assets based on project requirements and in-game implementation needs.
- Led and managed the admin team, including task coordination and daily team operations.
- Collaborated with team members to support project development and maintain smooth server operations.

Roblox Project

Jun 2025 – Jan 2026

Freelance - 3D Game Designer

- Designed and developed 3D maps and environmental assets for Roblox projects.
- Created map layouts based on project concepts and gameplay requirements.
- Collaborated with the project team to refine and implement 3D environments.

ORGANIZATIONAL EXPERIENCE

KMTE 115

Jun 2024 – Aug 2026

Publication & Documentation Staff - Eltrust 115

Sept 2024 - Jun 2025

- Created visual designs for supporter activities, including flag designs and social media content.
- Participated in flag production from design planning through final completion.
- Documented community activities and maintained organized photo and documentation archives.
- Coordinated with team members to prepare publication materials and strengthen the community's visual identity.

Fundraising Staff – Graduation Parade

Nov 2024

- Communicated and negotiated with external parties regarding sponsorship and event collaboration.
- Conducted fundraising activities through product sales to support event funding targets.
- Assisted in recording income and monitoring the achievement of fundraising targets.

Logistics Staff – Graduation Parade

May 2024

- Prepared, distributed, and managed logistical equipment and supplies for the graduation parade.
- Assisted with equipment setup, transportation, and arrangement based on event requirements.
- Coordinated with team members to ensure smooth, organized, and timely event operations.

PROJECT EXPERIENCE

Reconstruction of 3D Space Visualization Monitoring Based on a Moving 2D LiDAR

Aug 2026

Final Project – Telkom University

- Developed a ROS2-based mobile robot prototype for indoor 3D mapping using RPLIDAR A1M8 with a servo-based tilting mechanism.
- Integrated Raspberry Pi 4, Arduino Mega, DC motors, rotary encoders, LiDAR, and servo systems for data acquisition, robot movement, and odometry.

- Processed LiDAR, servo angle, and odometry data into 3D point clouds and visualized the mapping results using RViz2.
- Performed system calibration and testing, achieving an 8.00% average reconstruction error, 2.73 cm RMSE, and 0% ROS2 communication packet loss.

Smart Grid Stability Prediction Using Machine Learning

Jun 2026

Academic Project – Telkom University

- Developed and evaluated machine learning models to predict smart grid stability using a dataset of 60,000 operational samples.
- Compared Logistic Regression, Random Forest, and Multi-Layer Perceptron (MLP) models using classification metrics and hyperparameter tuning.
- Implemented a Random Forest model into a web-based prediction system using FastAPI, Gradio, and REST API.
- Achieved 95% accuracy with the deployed Random Forest model, while the MLP model achieved the highest accuracy of 98%.

Firmware Development for a Wheeled Robot System and Interactive Remote Control for Elementary School Education

Jan 2026

Copyrighted Work / Intellectual Property

- Designed the interactive remote control for an educational wheeled robot system.
- Developed the remote design based on usability, functionality, and interaction requirements for elementary school users.
- Collaborated with the project team to ensure the remote design was compatible with the robot system and its intended educational functions.

Hand Gesture-Based Music Control System

Jun 2025

Academic Project – Telkom University

- Developed a hand gesture recognition system using an ESP32 camera and Edge Impulse to control music playback.
- Collected, labeled, trained, and deployed a computer vision model for real-time gesture detection on the ESP32 platform.
- Integrated gesture recognition with a Flask-based HTTP server to execute Next and Previous music controls through Wi-Fi communication.
- Implemented local MP3 playback management using Python and Pygame based on detected hand gestures.

IoT-Based Smart Poultry Farm Control System

Jan 2025

Academic Project – Telkom University

- Developed an ESP32-based IoT system to monitor and control temperature, humidity, feed, and water conditions in a poultry farm.
- Integrated DHT11/DHT22, ultrasonic and water sensors, relays, DC motors, fans, and lighting into an automated monitoring and control system.
- Built a Blynk-based dashboard for real-time monitoring, notifications, and remote control of farm equipment.
- Implemented an automatic feeding mechanism and tested sensor, actuator, and IoT communication performance.

ESP32-Based Camera Slider Control System

Nov 2024

Instar Education project

- Developed the motor control system for an automated camera slider using ESP32 and Blynk.

- Implemented multiple movement modes, including end-to-end motion, manual control, and automatic movement with stops at seven predefined positions.
- Integrated Blynk-based remote control to allow users to select and operate different camera slider movement modes.

Fivem Project - Yume Roleplay Indonesia

Jul 2023 – Jan 2024

Game Asset Texture Designer & Admin Staff

- Created and modified textures for buildings, vehicles, and player clothing to match the server's visual identity.
- Customized existing game assets through retexturing to improve visual consistency and in-game appearance.
- Supported server operations as an Admin Staff member by assisting players and coordinating with the internal team.

Fivem Project - Wonderlast Roleplay

Jan 2024 – Apr 2024

Game Asset Designer & Admin Staff

- Retextured buildings, vehicles, and player clothing for in-game implementation.
- Created and modified 3D clothing assets based on server design requirements.
- Rebuilt and adjusted 3D vehicle models to improve their visual appearance and in-game compatibility.
- Supported server operations as Admin Staff by assisting players and coordinating with the internal team.

Fivem Project - Wasabi Garden

Feb 2025 - Apr 2025

3D Game Asset Designer & Admin Team Lead

- Designed and customized MLO/building assets for FiveM server environments.
- Created and modified textures for buildings, vehicles, and player clothing.
- Developed and adjusted 3D clothing and vehicle assets based on project requirements.
- Led and coordinated the admin team, including task distribution, team supervision, and daily server operations.

Roblox Project - Majas Studio

Jun 2025 – Jan 2026

3D Map Designer

- Designed and developed 3D maps and environments for Roblox based on client requirements and project briefs.
- Created customized layouts, structures, and environmental assets for various commissioned projects.
- Collaborated with clients and the internal team to revise and deliver map designs according to project specifications.
- Maintained confidentiality regarding client projects and unreleased game environments.

SKILLS

Hard Skills

Programming & Embedded Systems

C/C++, Python, Arduino IDE, ESP32, Raspberry Pi, Embedded Systems.

Electrical & Control Systems

Electrical Wiring, Soldering, Motor Control, Sensor & Actuator Integration, PLC Programming (CX-Programmer), DIgSILENT PowerFactory.

Robotics & IoT

ROS2, RViz2, RPLIDAR/LiDAR, Odometry, Point Cloud Processing, Internet of Things (IoT), Blynk IoT.

Engineering & Data

Fusion 360, Data Analysis, Energy Consumption Analysis, Microsoft Excel, Microsoft Office

Additional Technical Skills

Machine Learning, Scikit-Learn, Computer Vision, Edge Impulse, FastAPI, Flask, REST API/HTTP Communication.

SOFT SKILLS

Communication, Teamwork, Problem Solving, Time Management, Adaptability, Leadership.